

09/137,907
F.D. 08/21/98

CLAIMS

What is claimed is:

- 5
1. A method for enhanced software fault tolerance in a Distributed Component Object Model comprising the steps of:
- a client maintaining a pool of server object instances on multiple machines;
- the client invoking a first server object instance from the pool with a client request; and
- the client invoking a second server object instance from the pool based on an error by the first server object instance in processing the client request.
- 10
2. The method of claim 1 wherein the error by the first server object instance is identified by the first server object instance.
- 15
3. The method of claim 1 wherein the error by the first server object instance is identified by the client.
- 20
4. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:
- a client; and
- a pool of server object instances on multiple machines, wherein the client maintains the pool of server object instances, the client invokes a first server object instance from the pool with a client request; and the client invokes a second server object instance from the

Sub
Q2 }
pool based on an error by the first server object instance in processing the client request.

- 5
5. The system of claim 4 wherein the error by the first server object instance is identified by the first server object instance.

6. The system of claim 4 wherein the error by the first server object instance is identified by the client.

7. A method for enhanced software fault tolerance in a Distributed Component Object Model comprising the steps of:

determining a number (N) of different server object instances required to achieve a desired reliability or availability of a client;
maintaining a pool of at least N different server object instances on multiple machines;
and
invoking N different server object instances from the pool.

8. The method of claim 7 further comprising the steps of:

identifying an error produced by one of the N different server object instances; and
replacing the server object instance that produced the error with another server object instance from the pool.

9. The method of claim 7 wherein the error is identified by one of the N different server object instances.

10. The method of claim 7 wherein the error is identified by the client.

5
Sub 03 } 11. The method of claim 7 further comprising the steps of:

determining that an error was produced by one of the N different server object instances;
and
removing the server object instance that produced the error, if N is three or greater.

10
"403230" 12. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

15
a client; and
a pool of at least N different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, and the client invokes the N different server object instances from the pool to provide software fault tolerance.

Sub
A3
Cont'd

13. The system of claim 12 wherein the system determines that an error was produced by one of the N different server object instances and the server object instance that produced the error is removed from the system, if N is three or greater.

5 14. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client; and

10 a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, the client invokes N different server object instances from the pool, one of the N server object instances produces an error and the client invokes another server object instance from the pool as a replacement for the server object instance that produced the error.

15 15. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client; and

20 a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, the client invokes N different server object instances from the pool, the client identifies an error produced by one of the N different server object instances and the client invokes another server object instance from the pool as a replacement for the server object

*See
a3
cont'd* } instance that produced the error.

16. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

5 a client; and

a pool of at least N plus one different server object instances on multiple machines,
wherein N different server object instances are required, the client maintains the pool, the
client invokes N different server object instances from the pool, one of the N different
server object instances identifies an error produced by one of the N different server object
10 instances and the client invokes another server object instance from the pool as a
replacement for the server object instance that produced the error.